

Frank B. Johnston
Hatchinson Aircraft Service
Box 524
Berger, Texas

FAA APPROVED AIRPLANE
FLIGHT MANUAL SUPPLEMENT
MOONEY M18C

This supplement must be attached to the M18C airplane flight manual when the Continental C75-12 engine is installed per STC SA2-1506. Limitations contained herein supersede limitations appearing in the basic manual. For limitations, procedures, & performance not shown, consult the basic manual.

I. LIMITATIONS

- A. Engine: Continental C75-12 limits:
for all operations 2160 RPM 65 EHP
- B. Propeller: Flottrop 65A66. Static
RPM at full throttle: not more than
3000; not less than 1,800.
- D. Powerplant Instruments:
(c) Tachometer; Red radial at
2160--DO NOT EXCEED

II. PROCEDURES: NO CHANGE

III. PERFORMANCE: NO CHANGE

FAA APPROVED:

DATE: MARCH 22, 1962

D. A. Tuck
H. H. Slaughter,
Chief, Engineering & Manufacturing Br.
Southwest Region
FEDERAL AVIATION AGENCY

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE Mooney	MODEL N-18C	SERIAL NO. 248	NATIONALITY AND REGISTRATION MARK N4051
2. OWNER	NAME (Firm, middle, last) Clark E. Rice		ADDRESS (Street and number, city, state and state) 325 Moore Dr, Abilene, Texas	
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.				
UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check)
				MAJOR REPAIR MAJOR ALTERATION
AIRFRAME	***** (As described in Item 1 above) *****			#
POWERPLANT			The unit identified herein conforms with applicable requirements and is approved for the aircraft in which it is to be installed.	ide airworthiness certificate until replaced in the aircraft.
PROPELLER			3-22-62	<i>[Signature]</i>
APPLIANCE	TYPE AND MANUFACTURER		Date	
4. AIRCRAFT WEIGHT AND BALANCE DATA *AFTER the repairs and/or alterations described below were made.				
This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.				
CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*		USEFUL LOAD (Pounds)*
Normal	618.0	30.41		232.0
5. CONFORMITY STATEMENT (Complete and check)				
a. AGENCY'S NAME AND ADDRESS		b. KIND OF AGENCY		c. CERTIFICATE NO.
Frank B. Johnston, DBA Hutchinson Aircraft Service Box 524 Borger, Texas		<input checked="" type="checkbox"/> U. S. Certificated Mechanic. <input type="checkbox"/> Foreign Certificated Mechanic. <input type="checkbox"/> Certificated Repair Station. <input type="checkbox"/> Manufacturer. <input type="checkbox"/> (Check if repair or alteration was made under delegation option procedures.)		A&E 371307
6. I certify that the repair and/or alteration made to the unit(s) identified under Item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 15 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.				
<u>Jan 12, 1961</u> (Date repair and/or alteration completed)		<i>[Signature]</i> Frank B. Johnston (Signature of authorized individual)		
7. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items) Pursuant to the authority specified below the unit identified in Item 3 was inspected in the manner prescribed by the Administrator and is				
<input checked="" type="checkbox"/> APPROVED } BY { <input type="checkbox"/> CAA Designee <input type="checkbox"/> Manufacturer <input type="checkbox"/> Canadian Department of Transport Inspector of Aircraft <input type="checkbox"/> REJECTED } <input checked="" type="checkbox"/> CAA Aviation Safety Agent <input type="checkbox"/> Repair Station <input type="checkbox"/> Other (Specify)				
<u>3-22-62</u> (Date of approval or rejection)		<i>[Signature]</i> SN G-AD0-1 (Signature of authorized individual; title or identification number)		
7. TO BE COMPLETED ONLY BY CAA PERSONNEL				
<input type="checkbox"/> Forwarded for engineering comment <input type="checkbox"/> See attached memorandum <input type="checkbox"/> Accepted <input type="checkbox"/> Reinspected <input type="checkbox"/> Spot Checked				
Reg. 2 FW GSDO 1 (CAA designation number)		<i>[Signature]</i> (Signature Aviation Safety Agent)		

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

5. DESCRIPTION OF WORK ACCOMPLISHED.*

Substituted Continental C-75-12 engine for Continental A-65-8. Engine de-rated to 65HP by tachometer RED LINE at 2170 RPM, (CMC Power Curve 65 BHP prop load), and by installation of Flottorp 65A66 propeller which holds the max RPM to 1975RPM in VnE throttle closed dive. *As per STC SA2-1506*

Electrical system as installed by Factory activated. Battery, Regulator, Ammeter, and fuses added restored ac system. All wiring, cables, switches, lights, battery box already in place.

Employed all original cowls, baffles, exhaust system components, fuel system components, carburetor heater components, and engine mount. A-65-8 and C-75-12 are dimensionally identical. C-75-12 is 12 lbs. heavier.

Aircraft was originally certified as an A-65-12, and the factory provided space for starter and gear.

Ref: FAA Engine Specs or weight differences.

Aircraft test flown in 38deg. F. air with Bourdon tube temp bulb rigged in carb heat box. Application of heat gave a reading of 190 degrees.

Aircraft weighed ABSOLUTELY empty, with the following results:

Rt. wheel net	--	205.0 lb.
Left " "	"	202.0
Nose " "	--	211.0

Ref: Mooney WT & BAL data, main gear is 46.9" aft datum.
Nose gear is 1.4" fore datum.

$$\begin{array}{r}
 205 + 202 = 407 \text{ lb.} @ 46.9" = + 19088.3 \text{ moment} \\
 211 \text{ lb} @ -1.4 = - 295.4 \text{ " } \\
 \hline
 18792.9
 \end{array}$$

$$\begin{array}{r}
 18792.9 \\
 618.0 \\
 \hline
 = 30.41 \text{ CG.}
 \end{array}$$

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached.